

BARSKIY, I.B., kandidat tekhnicheskikh nauk; SOFIYAN, A.P., inzhener.

Reciprocity between soil and caterpillar drive. Nauch.trudy MAMI
no.6:44-54 '56. (MLRA 10:2)
(Caterpillar tractors--Testing)

BARSKIY, I.B., dots., kand. tekhn. nauk

Gas turbine engines used for tractors. Trakt. i sel'khozmasb.
no.1:8-10 Ja '59. (MIRA 12:1)

1. Moskovskiy avtomekhanicheskiy institut.
(Tractors--Engines)

BARSKIY, I.B., kand. tekhn. nauk

"Operational indices of agricultural tractors." Reviewed by I.B. Barskii. Trakt. i sel'khoz mash. no.12:44-45 D '59.

(MIRA 13:3)

1. Zaveduyushchiy kafedroy "Traktorostryeniya" Moskovskogo avtomekhanicheskogo instituta.
(Tractors)

BARSKIY, Igor' Borisovich, kand.tekhn.nauk, dotsent; LOMOVSKIY, Viktor Aleksandrovich, kand.tekhn.nauk, dotsent; KURBATOV, A.P., inzh., retsenzent; MINDEK', Ye.M., kand.tekhn.nauk, retsenzent; MIRONOV, A.P., kand.tekhn.nauk, retsenzent; IVANOV, V.V., kand.tekhn.nauk, red.; FAL'KO, O.S., red.izd-vn; TIKHANOV, A.Ye., tekhn.red.

[Tractors] Traktory. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1960. 295 p. (MIRA 14:1)

1. Lyuberetskiy tekhnikum sel'skokhozyaystvennogo mashinostroyeniya (for Kurbatov).

(Tractors)

BARSKIY, I.B., kand.tekhn.nauk; IVANOV, V.V, kand.tekhn.nauk

Increase the traction force of wheeled tractors. Trakt. i sel'khoz-
mash. 30 no.8:3-7 Ag '60. (MIRA 13:8)
(Tractors)

BARSKIY, Igor' Borisovich, prof.; TREPENKOV, I.I., kand. tekhn. nauk,
retsenzent; ANOKHIN, V.I., kand. tekhn. nauk, retsenzent;
BINOVICH, Ya.Ye., kand. tekhn. nauk, red. [deceased];
YEGORKINA, L.I., red. izd-va; EL'KIND, V.D., tekhn. red.

[Design of tractors] Konstruirovaniye i raschet traktorov.
Moskva, Mashgiz, 1962. 375 p. (MIRA 15:4)
(Tractors)

ASCHIN, I.P., doctor, techn. nauk; KOLUCHI, Yu.K., cand. techn. nauk;
YUY ZHONG-HUA [Yu Jung-hua], aspirant

Maximal dynamic loads in the transmission of a wheeled tractor.
Trakt. i sel'khoz mash. no.4:6-9 Ap '65. (MIRA 18:5)

1. Moskovskiy avtomekhanicheskij institut.

BRIMBERG, E.M. [Brumberg, Ye.M.]; BARSKIY, I.I. [Barskiy, I.I.]

Microscope for the ultraviolet fluorescent microscopy. Analele biol
16 no.4:141-149 J1-Ag '62.

*

BARSKIY, I.P., TIMOFEYeva, Z.M. (Stalinogorsk, Tul'skoy obl.)

Shop health unit in a plant. Vrach.delo no.11:1199-1200 N'58
(MIRA 12:1)

(INDUSTRIAL HYGIENE)

BARSKY, I.P.; SIZKOVA, Ye.L.; SHEFEL'MAN, K.S. (Stalinogorsk)

Therapeutic and prophylactic work in a catalyzing shop using
chromium compounds. Gig.truda i prof.zab. 3 no.3:54-55
Mg-Je '59. (MIRA 12:10)

1. Poliklinika Stalinogorskogo khimkombinata.
(POTASSIUM CHROMATE--TOXICOLOGY)
(STALINOGORSK--CHEMICAL INDUSTRIES--HYGIENIC ASPECTS)

BARSKIY, I.P.

Lowering the incidence of disease at the Stalinogorsk Chemical Combine.
Zdrav.Ros.Feder. 3 no.7:20-25 J1 '59. (MIRA 13:1)
(STALINOGORSK--CHEMICAL WORKERS--MEDICAL CARE)

BARSKIY, I.P.; RASTORGUYEV, S.N.

Apparatus for the treatment of ascariasis with gaseous oxygen.
Med.paraz. i paraz.bolezn. 23 no.1:99-100 Ja-F '59.

(MIRA 12:3)

1. Iz Stalinogorskogo gosudarstvennogo khimicheskogo kombinata.
(ASCARIASIS, ther.
oxygen, appar. (Rus))
(OXYGEN, ther. use,
ascariasis, appar. (Rus))

BARSKIY, Izrail' Petrovich

[Work of the polyclinic of the Stalinogorsk Chemical Combine]
Opyt raboty polikliniki Syalinogorskogo khimicheskogo kombinata.
Moskva, Medgiz, 1960. 104 p. (MIRA 14:7)
(Stalinogorsk--Chemical industries--Medical care)

BARSKIY, I.P. (Stalinogorsk)

Methods of registration and analysis of morbidity with loss of
working capacity in an industrial enterprise. Sov.zdrav. 20 no.1:
26-29 '61. (MIRA 14:5)
(INDUSTRIAL MEDICINE) (MEDICAL RECORDS)

BARSKIY, I.P.; SIZAREVA, Ye.S. (Stalinogorsk)

Improvement of working conditions in foundries. Gig. truda i
prof. zab. 4 no.1:43-44 Ja '60. (MIRA 15:3)

1. Gosudarstvennyy khimicheskiy kombinat imeni Stalina.
(FOUNDRIES—HYGIENIC ASPECTS)

BARSKIY, I.P. (Novomoskovsk)

Health Day at the Novomoskovsk Chemical Combine. Sov.zdrav. 22
no.2:13-18 '63. (MIRA 16:2)

(NOVOMOSKOVSK--PUBLIC HEALTH)

BARSKIY, I.P.; BARSKAYA, Z.M.;SIZIKOVA, Ye.L.

Organization of work of the plant physician in an industrial
enterprise. Gig. i san. 28 no.1:56-59 Ja'63. (MIRA 16:7)

1. Iz mediko-sanitarnoy chasti Novomoskovskogo khimicheskogo
kombinata.

(MEDICINE, INDUSTRIAL)

BARSKIY, I. Ya.

BRUMBERG, Ye.M.; MEYSEL', M.N.; BARSKIY, I.Ya.; BUKHMAN, M.P.

Experiment in ultraviolet fluorescence microscopy of biological
objects [with summary in English]. Zhur.ob.biol. 19 no.2:99-107
Mr-Ap '58. (MIRA 11:3)

1. Gosudarstvennyy opticheskiy institut im. S.I.Vavilova, Institut
biofiziki AN SSSR i Botanicheskiy institut im. V.L.Komarova AN SSSR.
(FLUORESCENCE MICROSCOPY) (ULTRAVIOLET RAYS)

BARSKIY, I.Ya., BRUMBERG, Ye.M.

Ultraviolet fluorescence of aromatic amino acid crystals
[with summary in English]. Biokhimiia 23 no.5:791-792
S-O '58 (MIRA 11:11)

1. Botanicheskiy institut imeni Komarova i Gorudarstvennyy
opticheskiy institut imeni S.I. Vavilova, Leningrad.
(AMINO ACIDS, determ.
ultraviolet fluorescence of aromatic acids crystals (Rus))

BRUMBERG, Ye.M.; BANSKIY, I.Ya.; MOROZ, P.E.

Ultraviolet microscopy of biological objects with incident
illumination. Biofizika 4 no.5:595-599 '59. (MIRA 14:6)
(MICROSCOPY) (ULTRAVIOLET RAYS)

BARSKIY, I.Ya.

Ultraviolet fluorescence of guanine on paper chromatogram and in solution. Biokhimiia 24 no.5:823-825 S-O '59. (MIRA 13:2)

1. Botanicheskiy institut im. V.L. Komarova Akademii nauk SSSR, Leningrad.
(PURINES chem.)

BARSIN, I.Ya.; BRUNBERG, Ya.L.; BURKH, I. Ya.; VASILYEVAYA, V.K.;
PLUZHNIKOVA, G.A.

Use of ultraviolet fluorescence microscopy in the study of botanical
objects. Bot.zhur. 46 no.5:632-642 Mar '62. (MIRA 12:11)

1. Botanicheskii institut im. V.I. Vernadskogo AN SSSR i Leningradskiy
gosuniversitet.
(Botanical research) (Fluorescence microscopy) (Photomicrography)

BRUMBERG, Ye.m. (Leningrad); BARSKII, I.Ya. (Leningrad)

Use of ultraviolet fluorescent microscopy with cytological
objects. TSitologiya 2 no.3:318-324 My-Je '60.

(MIRA 13:7)

(FLUORESCENCE MICROSCOPY) (CELLS)

ZUBZHITSKIY, Yu.N.; BARSKIY, I.Ya.

Combined luminescent and phase contrast microscopy. Lab.delo
6 no.3:42-43 My-Je '60. (MIRA 13:7)

1. Laboratoriya lyuminestsentnoy mikroskopii Leningradskogo
sanitarno-gigiyenicheskogo meditsinskogo instituta i labora-
toriya ekotsitofiziologii Botanicheskogo instituta imeni
V.L. Komarova.

(PHASE MICROSCOPY)

BARSKIY, I.Ya.; ZUBZHITSKIY, Yu.N.

Obtaining combined phase-fluorescence images. TSitologiya 3
no. 1:113-117 Ja-F '60. (MIRA 14:2)

1. Botanicheskiy instituta AN SSSR, Leningrad i Leningradskiy
sanitarno-gigiyenicheskiy meditsinskiy institut.
(FLUORESCENCE MICROSCOPY)

BRUMBERG, Ye.M.; BARSKIY, I.Ya.; KOLCHAT'YEVA, T.M.; CHERNOGRYADSKAYA, N.A.;
SHUDEL', M.S.

Ultraviolet fluorescence microscopy of formed elements of the marrow
and peripheral blood. Dokl. AN SSSR 135 no.6:1521-1524 D '60.
(MIRA 13:12)

1. Institut tsitologii Akademii nauk SSSR. Predstavleno akademikom
A.N. Tereninym.
(MARROW) (BLOOD CELLS) (FLUORESCENCE MICROSCOPY)

WIDSKYI, I. Ya., SEMENOV, F. M., and CHERNOMYATSKAYA, N. A. (USSR)

"Ultraviolet Fluorescence Microscopy of Bone Marrow and Peripheral
Blood Cells."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

32744

S/205/61/001/006/004/022
D268/D305

27.1220 also 2209

AUTHORS: Barenboym, G.M., Barskiy, I.Ya., and Pinto, R.I.

TITLE: On the effect of "in vitro" X-ray irradiation on the intensity of ultra-violet fluorescence in peripheral blood cells in the rat

PERIODICAL: Radiobiologiya, v. 1, no. 6, 1961, 843 - 850

TEXT: Ultra-violet fluorescent microscopy was used for studying changes in the individual irradiated cell in peripheral blood leukocytes from white rats, intensity of fluorescence being measured with a simplified adaptation of the apparatus previously described by the authors (Ref. 7: Biofizika, 1962, in the press). Short-wave ultraviolet rays with $\lambda = 250 - 280 \text{ m}\mu$ were used for excitation and 3 % sodium citrate solution with glucose as a stabilizer with the blood stabilizer ratio 2 : 1. The blood was irradiated "in vitro" with a PYM-11 apparatus (RUM-11 mass X-ray unit 11) with a dose rate of 600 rad/min. and the dose absorbed measured by the chemical method in equivalent conditions according to the iron sul-

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On the effect of "in vitro" X-ray ...

fate radiolysis yield and expressed in rads. Irradiated and non-irradiated blood used as the control was kept at room temperature and studied at 1, 2, 3 and 4 hours, being stained with acridine yellow immediately before use. In non-irradiated blood it was established that the fluorescence of leukocytes is considerably above that of the surrounding blood plasma. In irradiated blood cells there were individual fluctuations of fluorescence so that the results of experiments with similar radiation doses were treated statistically to obviate the effect of incidental factors. Analysis of the data revealed a clear radiation effect of incidental factors. Analysis of the data revealed a clear radiation effect 1 hour after irradiation, and a partial one after 30 minutes. A dose of 42 rad produced a negative effect i.e. the relative fluorescence of irradiated cells was less than that of non-irradiated. The effect increased as doses increased with maximum at 336 - 756 rad, declining slightly with a dose of 2,100 rad. An increase in the intensity of fluorescence of blood cells was also noted by photographing them in ultra-violet fluorescent light. The radiation effect was somewhat higher in segmental nuclear neutrophils than in lymphocytes. The

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D268/D305

On the effect of "in vitro" X-ray ...

radiation effect in these experiments was characterized by an increase in the relative fluorescence of irradiated as compared with non-irradiated cells. This may be due either to an increase in the intensity of cell fluorescence following slight changes in plasma fluorescence, or to a decline in intensity of plasma fluorescence, that of the cell remaining almost unchanged. Since proteins determine cellular fluorescence it is postulated that change in the intensity of protein fluorescence within a constant spectral region was the fundamental cause of the observed increase and decrease of fluorescence. According to V.Ya. Brodskiy and I.A. Suyetina (Ref. 14: Biofizika, 3, 92, 1955) change in the intensity of protein fluorescence in the cell may be caused by a reduction of the light absorption coefficient of nucleic acids and free nucleotides in the ultra-violet region under the action of irradiation. This would reduce their protein screening function, while a large part of the ultra-violet rays would reach the protein and increase the intensity of fluorescence. The author concludes that complex measurements of the absorption, excitation, and emission spectra with threshold restriction of the action on the cell of ultra-violet irradiation

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On the effect of "in vitro" X-ray ...

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D268/D505

are a prerequisite for a definite solution of these problems. This method is advocated for diagnosis in the early stages of radiation sickness since the first changes in relative cell fluorescence were noted with doses of 42 rad already in the first 5 - 10 min. after irradiation. There are 5 figures, 2 tables, and 18 references: 17 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: W. Gordy and H. Shields, J. Phys. Chem., 62, 789, 1958. X

ASSOCIATION: Institut tsitologii AN SSSR, Leningrad (Institute of Cytology, AS USSR, Leningrad)

SUBMITTED: May 22, 1961

Card 4/4

BRUMBERG, Ye.M.; BAKSKIY, I.Ya.; VARGINA, N.M.; KONDRAT'YEVA, T.M.

Use of ultraviolet microcinematography in observations on the
behavior of nucleic acids in living cells. TSitologiya 3
no. 1:85-88 Ja-F '61. (MIRA 14:2)

1. Gosudarstvenny opticheskiy institut i TSentral'nyy institut
meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR,
Leningrad.

(NUCLEIC ACIDS) (MICROCINEMATOGRAPHY) (ULTRAVIOLET RAYS)

BRUMBERG, Ye.M.; BARSKIY, I.Ya.; KONDRAT'YEVA, T.M.; CHERNOGRAYDSKAYA, N.A.

Ultraviolet fluorescence of formed elements in the marrow and peripheral blood of animals and man under normal and pathological conditions. Report No. 1: Ultraviolet fluorescence of formed elements in the marrow and peripheral. Biofizika 6 no. 1:114-118 '61. (MIRA 14:2)

1. Institut tsitologii AN SSSR, Leningrad.
(NARROW) (BLOOD CELLS) (FLUORESCENCE MICROSCOPY)

BARSKIY, I.Ya.; BRUMBERG, Ye.M.; KONDRAT'YEVA, T.M.

Ultraviolet fluorescence of bone marrow and peripheral blood elements in normal and pathological conditions in men and animals. Report No.2: Ultraviolet fluorescence of bone marrow and peripheral blood cells in animals in radiation injury. Biofizika 6 no.5:605-609 '61. (MIRA 15:3)

1. Institut tsitologii AN SSSR, Leningrad i Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii Ministerstva zdavookhraneniya SSSR, Leningrad.

(RADIATION SICKNESS)

(MARROW)

(BLOOD CELLS)

BRUMBERG, Ye.M.; BARSKIY, I.Ya.

Microscope for ultraviolet fluorescence microscopy. Zhur. ob.
biol. ~~22~~ no.6:459-466 N-D '61. (MIRA 14:11)

1. Gosudarstvennyy opticheskiy institut imeni S.I.Vavilova.
(FLUORESCENCE MICROSCOPY)

AGROSEIN, I.S.; BARSKIY, I.Ya.

Excitation spectra and intensity of natural fluorescence of cells.
Dokl. AN SSSR 139 no.4:987-990 apr '61. (MIRA 14:7)

1. Predstavleno akademikom A.N. Tereninym.
(Fluorescence) (Cells)

S/020/61/141/003/016/021
B103/B110

AUTHORS: Brumberg, Ye. M., Meysel', M. N., Corresponding Member AS
USSR, Barskiy, I. Ya., Zelenin, A. V., and Lyapunova, Ye. A.

TITLE: Ultraviolet luminescence of cells in mitotic division

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 3, 1961,
723 -- 725

TEXT: Cells and tissues grown outside the organism were studied: (a) human: an inoculated ~~descent~~ of amnion cells; (b) cultures of embryonic epithelium; (c) of fibroblasts; (d) animal: primary cultures of the kidneys of guinea pigs and monkeys. Single tissue cultures were grown on quartz glass and examined by ultraviolet-luminescence microscopy either living (in physiological salt solution) or after fixing by methanol. The methods had been described previously (Ye. M. Brumberg et al., Biofizika, 6, No. 1, 114 (1961); Ye. M. Brumberg et al. Tsitologiya, 2, 589 (1960); Ye. M. Brumberg, Zhurn. obshch. biol. 27, No. 6,

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Ultraviolet luminescence of cells in...

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401 (1956)). Microphotographs showed that the cells undergoing mitosis differed from cells at rest in the following facts: The cells at rest weakly fluoresce; fluorescence increases already during the early prophase and reaches maximum intensity in the middle of the metaphase. Then, it slowly decreases; however, until complete separation of the daughter cells, it exceeds the fluorescence of the cells at rest undergoing interkinesis. The cell nucleus, unlike the total cytoplasm, does not fluoresce. Dark, not fluorescing chromosomes can be seen on the background of the cytoplasm. The absorption of shortwave ultraviolet rays (250-270 mμ) by the cells increases with rising intensity of fluorescence. Absorption and fluorescence patterns interrelated like a negative and a positive; in both images, however, the chromosomes remain dark. The fluorescence of cells at rest is not so constant as that of dividing cells. There are always individual groups of brightly fluorescing cells at rest. In most cases these are degenerating, perishing cells whose increasing fluorescence is not accompanied by increased ultraviolet absorption. Chromoscopic examination (Ye. M. Brumberg. DAN, 25, 473 (1939)) showed degenerating cells at rest and dividing cells are

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Ultraviolet luminescence of cells in ...

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differently colored. Selective extraction of nucleotides, nucleic acids, and lipoids with perchloric acid in the cold and at 90°C, and with ribonuclease showed that the ultraviolet fluorescence of dividing cells is not due to the action of these extracted substances, except the bone marrow, the fluorescence of which rapidly decreases after extraction of nucleotides. The character of fluorescence cannot be changed by strong oxidizers and reducing agents (rongalite, potassium permanganate). 2% of urea somewhat increases the fluorescence of cells at rest. It is concluded that the intensity of fluorescence of cells undergoing mitosis is increased by high-molecular substances (most probably proteins containing cyclic amino acids) which are difficult to extract from the cell. This increase is possibly related to a reversible denaturation of protein in various physiological processes (muscular work). This might not be an absolutely formal analogy, since the occurrence of contractile proteins in the cell during mitosis had previously been proved. These proteins effect the mechanical work of chromosome separation and cell division. The muscles differ from other tissues in their particularly strong ultraviolet fluorescence. It is less probable that cell fluorescence during division should be increased by low-molecular substances

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which are produced in metabolic shifts or accumulated. This means that these shifts occur only in certain stages of mitosis (Refs. 8 and 9, see below), whereas an increase of fluorescence could be observed during all stages of division. Experiments will be continued. Ye. S. Zalmanzon is thanked for supplying the tissue cultures. There are 11 references: 7 Soviet and 4 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 8: H. A. Went, Ann. N.Y. Acad. Sci., 90, Art. 2, 422 (1960); Ref. 9: D. Mazia, Sulfur in Proteins, R. Bensh et al. edit., N.Y., 1959; Ref. 10: J. Brachet, The Biochemistry of Development, London, 1960. ✓

ASSOCIATION: Institut radiatsionnoy i fiziko-khimicheskoy biologii Akademii nauk SSSR (Institute of Radiation and Physico-chemical Biology of the Academy of Sciences USSR)
Institut tsitologii Akademii nauk SSSR (Institute of Cytology of the Academy of Sciences USSR)

SUBMITTED: August 28, 1961

Card 4/4

BARSKIY, I.Ya.; BRUMBERG, I.Ye.

Ultraviolet fluorescence of cells in rat lymphosarcoma. Tsitologia 4 no.3:328-330 My-Je '62. (MIRA 16:3)

1. Laboratoriya mikroskopii Instituta tsitologii AN SSSR i
Laboratoriya eksperimental'noy onkologii Instituta onkologii
AMN SSSR, Leningrad.
(HODGKIN'S DISEASE) (CELLS) (FLUORESCENCE)

BARENBOYM, G.M.; BARSKIY, I.Ya.; BRUMBERG, Ye.M.; PINTO, R.I.

Apparatus for measuring the fluorescence intensity of micro-
structures of biological objects. Biofizika 7 no.3:351-356 '62.
(MIRA 15:8)

1. Institut tsitologii AN SSSR, Leningrad.
(BIOLOGICAL APPARATUS AND SUPPLIES)
(FLUORESCENCE--MEASUREMENT)

BRUMBERG, Ye.M.; BARSKIY, I.Ya.; CHERNOGRYADSKAYA, N.A.; SHUDEL', M.S.

Ultraviolet fluorescence microscopy. Izv. AN SSSR. Ser. biol.
28.no.1:87-90 Ja-F'63. (MIRA 16:8)

1. Institute of Cytology, Academy of Sciences of the U.S.S.R.,
Leningrad.

(FLUORESCENCE MICROSCOPY)

ROZANOVA, L.M.; BARSKIY, I.Ya.; BRUMBERG, Ye.M.

Ultraviolet fluorescence of the blood cells in people with leukemia. Dokl. AN SSSR 150 no.4.907-908 Je '63.

(MIRA 16:6)

1. Leningradskiy nauchno-issledovatel'skiy institut pereli-
vaniya krovi. Predstavleno akademikom A.I. Oparinym.

(LEUKEMIA) (BLOOD CELLS) (MARROW)

BRUMBERG, Ye.M.; BARSKIY, I.Ya.; CHERNOGRYADSKAYA, N.A.; SHUDEL', M.S.

Nature of the ultraviolet fluorescence of cells. Dokl. AN SSSR
150 no.6:1356-1358 Je '63. (MIRA 16:8)

1. Institut tsitologii AN SSSR. Predstavleno akademikom A.I.
Oparinyam.

(BIOLUMINESCENCE) (CELLS)

BRUMBERG, Ye.M.; BARGMAN, I.Ya. (Leningrad)

Contact fluorescence microscope for medical examinations.
Arch. pat. no.7:59-62 '64. (MIRA 18:7)

1. Opticheskiy institut imeni S.I.Vavilova).

ACCESSION NR: AP4018285

S/0241/64/009/002/0029/0036

AUTHOR: Barskiy, I. Ya.; Gershanovich, M. L.

TITLE: Intravital histocytological method of investigating radiation skin injuries with a contact fluorescent microscope

SOURCE: Meditsinskaya radiologiya, v. 9, no. 2, 1964, 29-36

TOPIC TAGS: radiation skin injury, intravital histocytological method, contact fluorescent microscope, cytochemical tissue change, cellular element DNA shift

ABSTRACT: An intravital histocytological method of investigating radiation skin injuries without biopsy has been developed using a special contact fluorescent microscope constructed by Ye. M. Brumberg and I. Ya. Barskiy. The microscope and the techniques of investigation of radiation damaged skin areas with an acridine orange fluorescent dye are described in detail. With this method tissue changes and cytochemical changes including DNA and RNA shifts can be found, without discomforting the patient. Contact fluorescent microscopy provides an opportunity for intravital investigations of skin

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ACCESSION NR: AP4018235

radiation reaction processes important in the development of
prophylactic and therapeutic measures. Orig. art. has: 4 figures.

ASSOCIATION: Institut onkologii AMN SSSR (Oncology Institute AMN
SSSR)

SUBMITTED: 15Sep63

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: *LS*

NR REF SOV: 003

OTHER: 001

L 43011-65

ACCESSION NR: AP5008682

8/0077/65/010/002/0103/0107

AUTHORS: Berskiy, I. Ya.; Yakubenas, V. A. V.; Levina, V. V.

TITLE: Study of the occurrence of non-interchangeability of photographic materials in the ultra-violet region of the spectrum

SOURCE: Zhurnal nuchnoy i prikladnoy fotografii i kinematografii, v. 10, no. 2, 1965, 103-107

TOPIC TAGS: ultraviolet light, ultraviolet spectra region photography, photography, photographic material/ film Zt 7, film Ms, film A 500, sensitometer PSR 8, mercury lamp DRS-100, film panchrome 10, MF 2 micrometer

ABSTRACT: The authors conducted a study of the occurrence of noninterchangeability of photographic materials in various regions of the visible and ultraviolet spectra. Sensitometric device PSR-8 was used in obtaining characteristic curves for the illumination scale. Illumination was in the form of a high pressure mercury lamp DRS-100 with high energy brilliance in the ultraviolet region. Specially selected (GOST 2817-50) developers were used, and photographic materials were selected and exposed to certain wavelengths for varying periods of time (10^{-5} to 10^3 seconds). Photographic densities on a sensitogram were measured using Card 1/162.

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ACCESSION NR: AP5008682

micrometer MF-2. Iso-opaque curves were plotted versus exposure duration on logarithmic scales for several photographic materials and at varying illumination levels. An example of this type of plot is given in Fig. 1 on the Enclosure. The following photographic materials were used: photograph film IT-7, kinopositive - MZ, kinonegative - MZ, Panchrome - 10, astronomical film A-500. Additional curves were plotted to show sets of iso-opaque curves for selected densities and wavelengths. Figure 2 on the Enclosure is an example of this type of plot. It is stated that in the spectral region of 280-580 mμ the iso-opaque lines for densities 0.7-1.5 do not deviate from a mutually parallel condition by more than 0.15 units of log H. The authors thank Professor Yu. N. Gorokhovskiy for his cooperation and useful advice. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Gosudarstvennyy opticheskii institut im. S. I. Vavilova (State Optical Institute)

SUBMITTED: 07Mar64

ENCL: 02

SUB CODE: ES

NO REF SOV: 003

OTHER: 003

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SOV/24-58-11-35/42

AUTHORS: Barskiy, L. A., Plaksin, I. N. and Starchik, L. P.
(Moscow)

TITLE: Study of the Distribution of Ethyl Xanthogenate and
Lime on the Surface of Pyrite Particles by the Method of
Quantitative Radiography (Izucheniye raspredeleniya
etilovogo ksantogenata i izvesti na poverkhnosti
chastits pirita metodom kolichestvennoy radiografii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh
Nauk, 1958, Nr 11, pp 129-130 (USSR)

ABSTRACT: The aim of the investigation was to study micro-
radiographically two cases of distribution of flotation
reagents on the surface of particles of sulphide
minerals: 1) chemisorption coatings with a sulfhydryl
reagent in the layers composed of monomolecular layers
and 2) film formation during depression with lime forming
multi-layer coatings. In a table on p.129 the results
are given of the dependence of the adsorption of the
ethyl xanthogenate, located on the pyrite, on the pH
of the medium on the basis of data of quantitative
contrast radiography and radiometry for pH values of

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SOV/24-58-11-35/42

Study of the Distribution of Ethyl Xanthogenate and Lime on the
Surface of Pyrite Particles by the Method of Quantitative Radiography

1.9 to 11.9. The results are also graphed on p.130.
There are 1 table, 1 figure and 4 references, all of
which are Soviet.

SUBMITTED: January 20, 1958

Card 2/2

BARSKIY, L.A., inzh.

Method for the mathematical analysis of the results of
experiments in flotation. Nauch.sob.Inst.gor.dela 6:108-112
'60. (MIRA 15:1)

(Flotation)

BAISKIY, L.A. (Moskva); PLAKSIN, I.F. (Moskva); TYUMIKOVA, V.I. (Moskva)

Increasing the efficiency of hydroxyl collectors. Izv. AN SSSR. Otd.
tekhn. nauk. Mat. i topl. no.1:112-115 Ja-F '61. (IIFA 14:2)
(Flotation--Equipment and supplies)

BARSKIY, L. A.

Cand Tech Sci - (diss) "Complex action of organic reagents in the flotation of hard-to-concentrate molybdenum ores." Moscow, 1961. 23 pp; (Ministry of Geology and Conservation of Mineral Resources USSR, All-Union Scientific Research Inst of Mineral Raw Materials); 200 copies; price not given; (KL, 7-61 sup, 231)

FLAKSIN, I.N.; TYURNIKOVA, V.I.; BARSKIY, L.A.

Investigating the effect of dispersing agents on the hydrolysis of sodium oleate. Dokl. AN SSSR 139 no.3:669-672 J1 '61. (MIRA 14:7)

1. Chlen-korrespondent AN SSSR (for Plaksin).
(Oleic acid) (Hydrolysis)

OKOLOVICH, A.M.; BARSKIY, L.A.

Objectives in the development of new techniques for mineral
dressing. Izv. vys. ucheb. zav.; tsvet. met. 4 no.4:164-165
'61. (MIRA 14:8)

(Ore dressing)

BERGER, Gennadiy Semenovich; BARSKIY, L.A.; otv. red.; GARBER, T.N.,
red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Floatability of minerals] Flotiruemost' mineralov. Moskva,
Gosgortekhnizdat, 1962. 262 p. (MIRA 15:8)
(Flotation)

MITROFANOV, Spiridon Ivanovich, prof., doktor tekhn.nauk; BARSKIY,
L.A., otv. red.; GARBER, T.N., red. izd-va; OVSEYENKO, V.G.,
tekhn. red.

[Studying the beneficiation properties of minerals] Issledovanie
poleznykh iskopaemykh na obogatimost'. Izd.3., perer. i dop.
Moskva, Gosgortekhzdat, 1962. 579 p. (MIRA 16:3)
(Minerals—Analysis) (Ore dressing)

BARSKIY, L.A.

Use of electronic calculating machines for the investigation
of ores on their ability to undergo concentration. TSvet, met.
35 no.9:8-11 S '62. (MIRA 16:1)
(Electronic calculating machines) (Ore dressing)

POL'KIN, Stepan Ivanovich; GLADKIKH, Yuriy Fedorovich; BYKOV, Yuriy Aleksandrovich; BARSKIY, L.A. otv. red.; MAKRUSHINA, Ye.A., red.izd-va; MAKSIMOVA, V.V., tekhn. red.

[Dressing of tantalum and niobium ores] Obogashchenie rud tantala i niobia. Moskva, Gosgortekhnizdat, 1963. 186 p.
(MIRA 16:5)

(Ore dressing) (Tantalum) (Niobium)

EYGELES, Moisey Arnol'dovich, prof., doktor tekhn. nauk; LIFSHTIS, A.K., reitsenzent; BARSKIY, L.A., otv. red.

[Principles of flotation of nonsulfide minerals] Osnovy flotatsii nesul'fidnykh mineralov. Izd.2., perer. i dop. Moskva, Izd-vo "Nedra," 1964. 406 p. (MIRA 17:5)

BARSKIY, Lev Abramovich, KLASSEN, V.I., doktor ...
reitsenzent
[How minerals become useful] Kak iskopaemye stanoviat
poleznymi. Moskva, Nedra, 1964. 104 p. (MIRA 18:3)

FLAKSIN, I.N., otv. red.; GLEMBOTSKIY, V.A., doktor tekhn. nauk, zam. otv. red.; KLASSEN, V.I., doktor tekhn. nauk, red.; OKOLOVICH, A.M., kand. tekhn.nauk, red.; TRET'YAKOV, O.V., red.; BARSKIY, L.A., kand. tekhn. nauk, red.; MAKOVSKIY, G.M., red. izd-va; GOLUBE', S.P., tekhn. red.

[Ore dressing and coal preparation in the Kazakh S.S.R.; transactions of the out-of-town session in Balkhash and Karaganda, of the Section on Mineral Dressing of the Learned Council of the A.A.Skochinskii Mining Institute (November-December 1960)] Zadachi obogashchenia rud i uglei Kazakhskoi SSR; trudy vyezdnol sessii seksii obogashchenia poleznykh iskopaemykh Uchenogo soveta Instituta i gornogo dela im. A.A.Skochinskogo v gorodakh Balkhashe i Karagande, noyabr'-dekabr' 1960 g. Moskva, Izd-vo Akad. nauk SSSR, 1962. 173 p. (MIRA 15:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Flaksin).
2. Institut gornogo dela im. A.A.Skochinskogo (for Flaksin, Glerbotkiy, Okolovich, Klassen).

(Ore dressing)

(Coal preparation)

BARSKIY, L.A., kand.tekhn.nauk

Possibility of using electronic computers in studies of ore
dressing. Nauch. soob. IGD 16:37-42 '62. (MIRA 16:8)
(Ore dressing) (Electronic computers)

BARSKIY, Lev Abramovich; FLASKIN, Igor' Nikolayevich; TYURLIKOVA,
Vera Ivanovna

[Complex treatment in the dressing of molybdenum ores] Kom-
pleksnoe obogashchenie molibdenovykh rud. Moskva, Nedra,
1965. 198 p. (MIRA 18:4)

SECRET

1. The following information was obtained from a source who has provided reliable information in the past.

(SIA 1983)

2. The following information was obtained from a source who has provided reliable information in the past.

L 7036-66 EWT(d)/EEC(k)-2/T/EWP(1) IJP(c) HB/GG	
ACC NR: AP5026813	SOURCE CODE: UR/0286/65/000/017/0093/0093
AUTHOR: <u>Lanin, N. D.</u> ; <u>Barakiv, L. A.</u> 52 B	
ORG: none	
TITLE: A multichannel pneumatic system for information transmission with frequency division of channels. Class 42, No. 174444	
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 93	
TOPIC TAGS: <u>pneumatic computer</u> , pneumatic device, information processing	
ABSTRACT: This Author's Certificate introduces: 1. A multichannel pneumatic system for information transmission with frequency division of channels. The unit contains carrier frequency oscillators, modulators, a linear mixer, band filters and demodulators. The pneumatic communication lines are multiplexed by using a pneumatic filter in the system and also an adder connected to a multiplier. The output from the multiplier is the output for the entire system. This output is connected to two aperiodic sections, and the outputs from these sections are connected to the adder. 2. A modification of this system which produces sinusoidal oscillations. The pneumatic modulator-generator contains the adder and servochamber. The servochamber nozzle is connected to the adder output, and the transmission line for the signal which determines the amplitude of the output oscillations is connected to the nega-	
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L 7036-66

ACC NR: AP5026813

tive chamber of the adder and through a fixed resistance to the nozzle compartment.
3. A modification of this system in which the pneumatic demodulator contains a relay connected in an iteration scheme, and a diode which is connected to the control chamber of the relay and through a resistance to the atmosphere.

SUB CODE: DP/ SUBM DATE: 30Jan64/ ORIG REF: 000/ OTH REF: 000

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Card 2/2

L 24208-66 EWT(m)/EWP(t) JD/JXT(BF)

ACC NR. AP6015176

SOURCE CODE: UR/0032/65/031/010/1235/1237

AUTHOR: Plaksin, I. N.; Barskiy, L. A.

ORG: Institute of Mining im. A. A. Skochinskiy (Institut gornogo dela)

TITLE: Experiment in generalizing and coding information on ore concentration

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1235-1237

TOPIC TAGS: information storage and retrieval, computer coding, metal, mineral, ore

ABSTRACT: At the present time about 2,500 articles, books, and patents are published yearly in the whole world on problems of ore dressing. The existing universal decimal classification on the concentration of ores is composed in a general form and contains a number of specific inaccuracies which complicate its application in searching for information on specific problems.

In the process of work, certain methods were used by the authors which facilitated searches for information on concentration of ores and also proposals were formulated relative to the compilation of articles and abstracts, which increase the effectiveness of their use.

An article or abstract should be composed according to a general scheme. For example, for an article on the technique of ore concentrating the following plan can be recommended:

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UDC: 519.24

L 24208-66-

ACC NR: AP6015176

1. Prerequisites: a) material (description of ore, minerals, reagents); b) literature sources.
2. Method of investigation: a) scale (laboratory, semi-industrial, theoretical); b) description of apparatus, operating conditions, or citation to the corresponding report. For new methods the probable experimental error should be indicated; c) the method of treating the results, use of special criteria and graphics.
3. The obtained experimental data.
4. Discussion of the results and the conclusions.
5. Bibliography.

As practice has indicated, in a work compiled according to such a scheme, the number of repetitions, general phrases, well known conditions and other information of little value is kept to a minimum.

For technical problems and particularly for the concentration of ore, the most suitable searching system is the superpositional coordinate system of indexing. Each axis of the coordinate system includes a set of questions which cover all their varieties according to some kind of single principle. Any report can be characterized accurately, which is found on the intersection of the corresponding coordinates and which characterize the classification of a given report from the viewpoint of each of the principles. Layout of the axes should be done in such a manner that for a mass of questions dealing with the effort of a single laboratory a minimum number of headings would permit finding of the information on these

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questions with the greatest accuracy. For concentration of ores the following four axes can be broken down. I. The process of concentrating. 0 -- general questions; 1 -- description of enterprises; 2 -- crushing, grinding; 3 -- classification according to coarseness and shape; 4 -- gravitation (tabling, jigging, etc.); 5 -- flotation; 6 -- flotation-gravitation and combined methods; 7 -- magnetic, electrical, radiometric, concentrating according to color and brilliance; 8 -- hydrometallurgy; 9 -- thermal processes, roasting, drying, agglomerating, briquetting, coking. II. 0 -- general questions; 1 -- theory; 2 -- mathematical description; 3 -- equipment; 4 -- auxiliary processes; 5 -- auxiliary equipment; 6 -- inspection and testing; 7 -- automation; 8 -- economics; 9 -- comparison of different ores. Here the first axis characterizes the technical process; the second -- the basic trends of research of each process. For example, according to axis I, section 5 ("flotation") can be interpreted in accord with the list of axis II in the following manner: 50 -- monographs of a general character, teaching manuals, conferences, historical surveys; 51 -- theory, elementary act; theory of surface phenomena; 52 -- kinetics, criteria of effectiveness, mathematical models; 53 -- flotation machinery; 54 -- absorption, contacting, acid and base processing of pulps, non-formation of tailings; 55 -- reagents, reagent suppliers, contact vats; 56 -- flotation machinery control pH sensors, reagent concentration sensors, reserve of metals, testing; 57 -- automation of flotation, factory control; 58 -- economic problems of flotation, complexity of flotation processes; 59 -- flotation methods and a comparison of them.

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ACC NR: AP6015176

Section 2 "mathematical description" of axis II in accord with the intersection of axis I is interpreted in the following manner: 02 — mathematical models and description of separation process; 12 — calculation of schemes and equipment; 22 — mathematical description of grinding and crushing; 32 — granulometric characteristics and graphic descriptions; 42 — kinetics and efficiency of gravitational process; 52 — (see above); 62 — kinetics, mathematical models of combined processes, etc.

III. Scale of research. 0 — general; 1 — theoretical; 2 — economics; 3 — designing; 4 — laboratory; 5 — semi-industrial; 6 — industrial.

IV. Valuable component of mineral is denoted by the symbol of the corresponding chemical element or the first letter of mineral's name (U [Cyrillic] — coal, a [Cyrillic] — diamond, Cu — copper, etc.

Thus, any question can be coded with four symbols, and the article or book — by several combinations of such symbols. For example, the article "Laboratory Research of Reagents for Flotation of Copper and Iron Ores" will be coded in the form 553 Cu-Fe.

A system of coordinates for any narrower circle of questions can be coded or compiled according to this same principle.

For example, in the Laboratory of Automation of Giredmet, together with the Council on Cybernetics of the Academy of Sciences USSR under the leadership of V. V. Nalimov, a card index on punch cards is being created for the application of mathematical methods of research. [JPRS]

SUB CODE: 05, 08 / SUBM DATE: none / ORIG REF: 005

Card 4/4 BLQ

BARSKIY, L.I.

Barskiy, L.I., "Temperature Regulators of Improved Accuracy for Laboratory
Thermostats and Drying Racks," Informatsionnyy tekhnicheskiy sbornik
TsBTI [TsBTI Reference Technical Manual], Ministry of Electric Industry
USSR, 1953, No 53, pages 22-24, three figures.

WASH. DC: 1970, 110.

1. The above information is being furnished to you for your information only. It is not to be used for any other purpose.

(SIA 1:10)

2. The above information is being furnished to you for your information only. It is not to be used for any other purpose.

BARSKIY, M.D.; LEVCHENKO, P.V.; DOLGANOV, Ye.A.

Effect of the comminution of material during size classification on the effectiveness of the process. Izv. vys. ucheb. zav.; khim i khim tekhn. 7 no.5:858-861 '64 (MIRA 18:1)

1. Kafedra mekhanicheskogo oborudovaniya silikatnykh proizvodstv Ural'skogo politekhnicheskogo instituta imeni S.M. Kirova.

BARSKIY, M.I., inzh.

Studying optimal operating conditions of an air classifier. Izv.vys.
ucheb.zav.ygor.zhur. 7 no.6:145-150 '62. (MIRA 17:12)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova. Rekomendovana
kafedroy mekhanicheskogo oborudovaniya sil'skoykh proizvodstv.

DOLGANOV, Ye.A.; SHTEYNBERG, A.M.; BARSKIY, M.D.

Effectiveness of the classification process. Izv. vys.
ucheb. zav.; khim. i khim. tekhn. 8 no.3:499-503 '65.

(MIRA 18:10)

1. Ural'skiy politekhnicheskiy institut imeni Kirova i
Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgi-
cheskoy teplotekhniki.

BARSKIY, M.E.

AZAROV, A.S., kandidat tekhnicheskikh nauk, dotsent; BARSKIY, M.E., inzhener, retsenzent; BULOVSKIY, P.I., kandidat tekhnicheskikh nauk, redaktor; POL'SKAYA, R.G., tekhnicheskiiy redaktor.

[Mechanization and automatization in cutting machine parts]
Mekhanizatsiia i avtomatizatsiia obrabotki detaiei rezaniem. Moskva,
Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1954. 209 p.
(MLRA 7:12)

(Machine tools) (Machinery, Automatic)

KUCHER, Iosif Mikhaylovich, kandidat tekhnicheskikh nauk, dotsent; SHAVLYUGA, Nikolay Ignat'yevich, kandidat tekhnicheskikh nauk, dotsent; BARSKIY, M.E., inzhener, redaktor; DRUZHINSKIY, I.A., kandidat tekhnicheskikh nauk, redaktor; SIMONOVSKIY, N.Z., redaktor izdatel'stva; SOKOLOVA, L.V., tekhnicheskij redaktor

[Automatization of machine tools; a survey of foreign technology]
Avtomatizatsiya metallorazhreshchikh stankov; obzor zarubezhnoi tekhniki. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 168 p. (MLRA 9:11)

(Automatic control)

(Machine tools)

BARSKIY, Maksim Emil'yevich, inzh.; POSTERNYAK, Ye.P., inzh., red.;
~~PREGER, D.P., tekhn.red.~~

[Modernizing milling machines for copying machining] Moderni-
zatsiia frezernykh stankov dlia vypolneniia kopiroval'nykh
rabot. Leningrad, Leningr.dom nauchno-tekhn.propagandy, 1958.
22 p. (Informatsionno-tekhnicheskii listok, no.91-92. Moderni-
zatsiia i remont oborudovaniia). (MIRA 12:12)
(Milling machines)

KUCHER, Iosif Mikhaylovich, kand. tekhn. nauk.; KUCHER, Aleksandr Mikhailovich, kand. tekhn. nauk.; BARSKIY, M. E., inzh., retsenzent.; BLYUMBERG, V.A., kand. tekhn. nauk, red.; LEYKINA, T.L., red. izd-va.; POL'SKAYA, R.G., tekhn. red.

[Modernization and automatization of machines] Modernizatsiya i avtomatizatsiya stankov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 372 p. (MIRA 11:12)
(Machine tools)
(Automatic control)

Barskiy, M.E.

AUTHOR: Pogodin, B.A., and Barskiy, M.E., Engineers 117-3-3/28

TITLE: Sharpening Precision Hobs (Zatochka pretsizionnykh chervyachnykh frez)

PERIODICAL: Mashinostroitel', 1958, # 3, p 7-9 (USSR)

ABSTRACT: The semi-automatic cutter grinder, model " 3A 642" of the Vitebsk Cutter Grinder Plant (Vitebskiy zavod zatochnykh stankov) used at the Leningrad plant "Ekonomayzer" for sharpening hobs of 50 mm diameter and 200 mm length, with straight or helical grooves, is well suited for hobs of conventional accuracy but not for precision hobs designed for cutting the precision gears of turbine gear drives. Precision hobs are made with larger than common diameters and tooth numbers and a much steeper thread angle, which makes precise setting of this particular grinder impossible. Therefore, every tooth of a precision hob has to be finished separately after the automatic grinding cycle.

To facilitate the task of sharpening precision hobs, a two-position switch has been included into the electric system of the grinder to set it either for sharpening every hob tooth separately or for sharpening all hob teeth simultaneously. Special instructions, in accordance with recommendations of the Gear Drive Department of TsNIITMASH, have been composed for

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Sharpening Precision Hobs

117-3-3/28

determining the accumulated circular pitch error and the depth of metal to be removed from each tooth.

The article contains detailed operation information and design description accompanied by a kinematic diagram of the "SA 642" grinder and its electric diagram, without the two-position switch and with the two-position switch.

There are 3 diagrams.

ASSOCIATION: Leningrad Plant "Ekonomayzer" (Leningradskiy zavod "Ekonomayzer")

AVAILABLE: Library of Congress

Card 2/2

BLYUMBERG, V.A.; SERGEYEV, M.A.; KROPIVNITSKIY, N.N., inzh., retsenzent;
LIBKIND, M.M., inzh., retsenzent; BARSKIY, M.R., inzh., red.;
VARKOVETSKAYA, A.I., red.izd-va; SPERANSKAYA, O.V., tekhn.red.;
DLUGOKANSKAYA, Ye.A., tekhn.red.

[Operator of boring and turning lathes] Tokar'-karusel'shchik.
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959.
422 p. (MIRA 12:11)

(Lathes)

25(5)

SOV/117-59-4-2/36

AUTHORS: Barskiy, M.E., Blyumberg, V.A., Gushchin, V.F.,
and Kucher, I.M., Engineers.

TITLE: The Automation of Machining in Small-Lot Production
by the Use of Hydro-Tool Rests.

PERIODICAL: Mashinostroitel', 1959, Nr 4, pp 3-8 (USSR)

ABSTRACT: The authors treat the problems discussed at a special conference on the matter of application of hydraulic tracer tool rests ('GS-1' and KST-1") for machine tools employed in the small-lot machining of complex staged or otherwise shaped machine parts. The conference convened from 23 to 27 March and was organized by the Leningrad NTO MASHFROM board. Automation with the subject tool rests would greatly raise the rate of machining (25-50% and in some cases much more); and they are very well applicable for lathes, but cannot be used without some additional equipment

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The Automation of Machining in Small-Lot Production by the Use of Hydro-Tool Rests.

(Like driver centers, floating centers, pneumatic cylinders, special mandrels, etc.). Some conventional machine part designs would have to be slightly changed, and the application is not clearly commercial in all possible cases, for the time gain can be obtained on the account of auxiliary machine tool work, while the cutting process itself is not speeded up but becomes somewhat slower. The article describes a driver center (Figure 2) used at the Leningradskiy stanko-stroitel'nyy zavod im. Sverdlova (Leningrad Machine Tool Plant imeni Sverdlov). The tracers in use (Figure 4), the conclusions of the Leningradskiy inzhenerno-ekonomicheskii institut, "LIEI" (Leningrad Engineering-Economic Institute) made after a study of the commerciability of the tool rests and recommendations

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The Automation of Machining in Small-Lot Production by the Use of Hydro-Tool Rests.

concerning details of the machining process with the use of the hydro-tool rests. Design changes needed for the application of the hydro-tool rests will be described in the next issue of this periodical. There are 5 diagrams, 2 graphs, 1 table and 1 Soviet reference.

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28(1)
25(7)

30V/117-55-5-4/30

AUTHORS: Barskiy, M.E., Blyumberg, V.A., Gushchin, V.F., and Kucher, I.
M., Engineers

TITLE: The Automation of Machining in Small-Scale Production by
Using Hydraulic Slide-Rests

PERIODICAL: Mashinostroitel', 1959, Nr 5, pp 7-12 (USSR)

ABSTRACT: This is the second part of an article (see the beginning in
"Mashinostroitel'", 1959, Nr 4). This chapter lists improve-
ments of hydraulic slide-rests, introduced at the Leningrad-
skiy zavod "Bol'shevik" (Leningrad "Bol'shevik" Plant), the
Leningradskiy zavod imeni Kirova (Leningrai Plant imeni Kirov)
and others. The following are listed: an attachment for multi-
pass operations with the "GS-1" slide-rest (Figure 1); a si-
milar attachment for the "KST-1" slide-rest (Figure 2); stops,
limiting the slide-rest travel from left to right and on the
copying motion guides toward the centers axis (Figures 3, 4).
These stops eliminate time waste and prevent the breakage of
cutting tools. It is mentioned that the "GS-1" gives only a

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The Autom of Machining in Small-Scale Production by Using Hydraulic Slide-Rests

low-diameter accuracy of work (frequently even below the 5th "OST" accuracy class), the reason being the changing temperature of the hydraulic oil during the first 2-3 hours of operation or after stoppages. But the "KMT-1" and "UP-240" achieve an accuracy of "3 a" class in a stable work process. The linear dimensions are not affected by oil temperature changes. The Leningradskiy inzhenerno-ekonomicheskoy institut (Leningrad Institute of Economic Engineering) stated that a static error in the follow-up system causes a systematical error of 0.03 to 0.1 mm in the linear dimensions of all hydraulic slide-rests. The causes of the low rigidity of the "GS-1" were investigated with the use of indicators placed as shown in Figure 6. The results are specified. Detailed information is given on a new hydraulic slide-rest type "GIZ-1", designed by V.F. Gushchin and built at the Izhoroskiy mashinostroitel'nyy zavod (Izhorskiy Machine Building Plant), for use on the "IK62" lathe (Figure 7). The outstanding features of the "GIZ-1" are given. 1) It is attached directly to the cross-slide, on

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SOV/117-59-3-4/30

The Automation of Machining in Small-Scale Production by Using Hydraulic Slide-Rests

the rear; it is small and its center of gravity is so placed that the slide cannot shift. 2) It may be used with a circular as well as with a flat tracer and the work edge of the feeler is approximately at the center of the possible swing of the slide, so that no shifts of the follow-up displacements are possible if the slide shifts. 3) The hydraulic slide is a massive round bar and the cutting tool is attached to its body. The bar is at the same time a hydraulic cylinder, which displaces in relation to a fixed piston. It is provided with a separate aperture for attaching boring bars. 4) The hydraulic system is exactly the same as in the "KST-1" and "GS-1" hydraulic slide-rests. At the Leningrad "Bol'shevik" Plant, the lathe operator V.N. Trutnev developed a hydraulic slide-rest for the "1A62" lathe. The particular feature of this slide-rest is the absence of a separate motor for the drive of the hydraulic pump. It is being used for machining external complex surfaces, as well as internal complex surfaces (stepped or otherwise shaped) (Figures 8,9).

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197/11-88-3-4/30

The Automation of Machining in Small-Scale Production by Using Hydraulic Slide-Rests.

Recommendations are included for designing hydraulic slide-rests. There are 10 sets of diagrams, 1 table, and 1 Soviet reference.

Card 4/4

BARSKY, M.E.

PLATE 1 BOOK EXTRACTS 607/1113

Automation of mechanical processes in the metalworking industry. Moscow, Mashin, 1979. 308 p. Extra slip inserted. 4,000 copies printed.

General Ed.: I.M. Dubrovskiy. Ed.: M. V. Kuznetsov, Candidate of Technical Sciences, Doctor, and Ye. V. Miller, Candidate of Technical Sciences, Doctor; Ed.: of Publishing House: I.L. Lyubimov and M.A. Chirak. Tech. Ed.: O.Y. Gerasimov; Managing Ed. for Literature on Machine-Building Technology (Leningrad Division, Mashin): Ye. P. Isakov, Engineer.

NOTE: This book is intended for technical personnel.

COPYRIGHT: The book deals with the automation of mechanical working processes in small-scale production in the metalworking industry. The use of hydraulic copying slide rests is explained, and practical experience in the introduction of copying slide rests into existing plants is described. The improvement of such slide rests, the technical and economic effects resulting from their usage, and methods of designing master forms are discussed. New aspects of hydraulic slide rests are described. Requests for solutions of problems of program control, especially for the simplest control systems and a number of the original systems are described.

Automation problems involved in the group mechanical method are investigated. In particular, they are mentioned. There are 37 references. 46 Soviet and 11 English. This book is for production.

Author: I.M. Dubrovskiy. Experience gained in the use of hydraulic copying slide rests is for production.

SECTION II.

MECHANICAL PROGRAM CONTROL

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